

~~SECRET~~

Machine Division

John Luhn

Charged with the responsibility for the development and efficient operation of special machines and equipment for OCD, and for providing advisory services for CIA offices and IAC agencies on the availability and use of machine methods and equipment for intelligence operations, the machine experts in OCD were always looking for and experimenting with new systems and/or equipment.

A few of these during the early 1950's included the following:

1. The Luhn Equipment or the ^{25X1A9a} Project

The Machine Division worked closely with OSI, which ^{25X1A5a1}

had originally sponsored this project with ^{25X1A5a1}

^{25X1A5a1} personnel. The basic approach toward

identifying and recovering information was to utilize IBM

cards and specialized IBM machines (developed by H. Luhn)

as preparation and selection media. The code system to be

utilized in this system required that five out of twelve possible

positions had to be punched in each column of coded information,

thus allowing approximately 750 separate meanings to be punched

in each card column. This system required searching of all

material contained in the file for each request. The encoding of ea

word or phrase as such related it to other terminology useful

for machine searching. Dr. ^{25X1A5a1} and his team from OSI

spent many months in ^{1951/52} with OSI personnel, Machine Division

personnel, and Analysis Branch indexers, in the latter for the

development of a code in the "semantic factoring" type

GROUP 1
Excluded from automatic
downgrading and
declassification

~~SECRET~~

By November 1952 Andrews wrote AD/OIC that he did not feel that much tangible benefit would be gained by the project and he did not approve of an extension of the contract.

25X1A5a1

2. ~~██████████~~ Coordinate Indexing

25X1A9a

~~██████████~~ attended a course at the Department of Agriculture in 1952 given by ~~██████████~~ on coordinate indexing. This form of indexing ~~was a logical approach to~~ cards were set up for each subject encountered, and on each card, document numbers were entered for each document that contained that subject. ~~Each card or series of cards~~ If a relationship between two subjects was required, then two cards or series of cards relating to the two subjects would be pulled and coincidence of document numbers could be noted visually. A simple logical system, the authors stressed that it could be applied with many applications, both manually and mechanically.

25X1A9a

25X1A5a1

3. ~~██████████~~ Project ~~██████████~~ - Rapid Selector Project

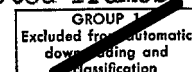
25X1A5a1

25X1A9a

25X1A5a1

This project was carried on jointly between ~~██████████~~ ORR personnel and ~~██████████~~ University. The basic idea was to combine a picture of a document or photograph on film with a dot code pattern immediately preceding it and ^{using} ~~building a machine to be known as a~~ Rapid Film Selector (see ~~██████████~~ of Dept. of Agriculture; later one of Library Consultants in 1957), capable of selecting required frames of documents or pictures through the use of an identifying mechanism, recognizing proper code dot patterns and yielding another strip of film containing the images of the selected frames.

SECRET



Machine Division - 3

SECRET

~~Because the system~~

MD commented that the system would require a complete search

of all material and that it would not be possible to process the film

until all scanning had been completed. Therefore, the system

would be too slow and cumbersome for mass production requirements.

*By 1954/55 OGD had doubt that the Rapid
Selector could meet the realistic but high
standards required. And by this time
minicard was on the horizon and it
was felt that it could do a far better job
than the Rapid Selector*

SECRET

GROUP 1 Excluded from automatic downgrading and declassification
